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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/541,430	07/05/2005	Hiddenari Ota	235-05	6253

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Philadelphia, PA 19103

EXAMINER

CADUGAN, ERICA E

ART UNIT	PAPER NUMBER
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3722

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	03/16/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No. 10/541,430	Applicant(s) OTA, HIDENARI	
	Examiner Erica E. Cadugan	Art Unit 3722	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 July 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 July 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input checked="" type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. <u>20070313</u> |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>7/5/05</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Information Disclosure Statement

1. The listing of references in the specification (see page 1) is not a proper information disclosure statement. 37 CFR 1.98(b) requires a list of all patents, publications, or other information submitted for consideration by the Office, and MPEP § 609.04(a) states, "the list may not be incorporated into the specification but must be submitted in a separate paper." Therefore, unless the references have been cited by the examiner on form PTO-892, they have not been considered.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 1-6 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 1, line 6 of the claim, it is unclear as set forth in the claim (via the use of the indefinite article "a") whether "a table" is intended to be different from the "table" previously set forth in line 3 of the claim. If, as it appears, they are intended to be the same table, Examiner suggests changing "a table" in line 6 to --the table-- or --said table--.

In claim 1, line 7, it is unclear as set forth in the claim (via the use of the indefinite article "a") whether "a pallet-mounting plate" is intended to be different from the "a pallet-mounting plate" previously set forth in line 3 of the claim. If, as it appears, they are intended to be the

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same pallet-mounting plate, Examiner suggests changing “a pallet-mounting plate” in line 7 to -- the pallet-mounting plate -- or --said pallet-mounting plate --.

As set forth in claim 1, lines 8-9, it is unclear to what structure the claimed “vertical surface” belongs, i.e., a vertical surface of what.

In claim 1, line 10, “the work” lacks sufficient antecedent basis in the claim.

In claim 1, line 11 of the claim, it is unclear as set forth in the claim (via the use of the indefinite article “a”) whether “a pallet exchanger” is intended to be different from the “pallet exchanger” previously set forth in lines 1-2 of the claim. If, as it appears, they are intended to be the same pallet exchanger, Examiner suggests changing “a pallet exchanger” in line 11 to --the pallet exchanger -- or --said pallet exchanger --.

In claim 2, line 7, “the pallet moving side” lacks sufficient antecedent basis in the claim.

In claim 3, (multiple occurrences) “the pallet” lacks sufficient antecedent basis in the claim (plural pallets previously set forth).

There are several other positively recited limitations that lack sufficient antecedent bases in the claims. A few examples of this are: “the radial direction” in claim 3, lines 5-6; “the rotary circle” in claim 3, line 6; “the pallet stocker” in claim 4, line 8 and line 10 (previously “at least one”); “the pallet” in claim 4 (plural pallets previously set forth); “the track” in claim 6, last line. This is not meant to be an all-inclusive list of such occurrences. Applicant is required to review the claims and correct any other such occurrences of limitations lacking sufficient antecedent basis.

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In claim 5, if the plurality of pallet stockers in line 5 are intended to be a subset of the previously claimed "at least one pallet stocker", Examiner suggests changing "a plurality of pallet stockers" to --a plurality of the pallet stockers-- for clarity.

Double Patenting

4. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

5. Claims 1-2 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-2 of commonly assigned copending Application No. 10/544,192.

For double patenting to exist between claims 1-2 of the present case and claims 1-2 of the '192 application, it must be determined that the rejected claims are not patentably distinct from claims 1-2 of '192. In order to make this determination, it first must be determined whether there are any differences between the rejected claims and claims 1-2 of '192, and, if so, whether those differences render the claims patentably distinct.

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In the present claims 1-2, each of the limitations of claims 1-2 of '192 are present. Additionally, the present claims 1-2 set forth the additional limitation that the claimed pallet changer is part of a "machine tool facility".

However, although the conflicting claims are not identical, they are not patentably distinct from each other because:

Note that even though the claims 1-2 of the '192 case do not expressly set forth a "machine tool facility", as claimed in claims 1-2 of the '192 case, the pallet changer is used with a machine tool having the same structure as the machine tool claimed in present claims 1-2, which inherently (as broadly claimed) means that claim 1 of '192 in at least some capacity includes a machine tool "facility". Specifically note that claim 1 of '192 positively recites that the pallet support member of the pallet changer is "disposed adjacent to the table or said pallet mount" of the claimed "machine tool comprising a spindle supported so as to be rotatable about a horizontal axis for mounting a tool at the forward end thereof, and a table or a pallet mount facing the front of said spindle...". In other words, claim 1 of '192 includes a positive recitation of the machine tool structure at least by requiring that the pallet support member be "disposed adjacent" structure of the claimed machine tool, thereby providing that claims 1-2 of '192 include machine tool structure, and thereby inherently providing that the structure of claims 1-2 of '192 is part of a "machine tool facility" (i.e., any "facility" or location having a machine tool, as broadly claimed) by virtue of the fact that the machine tool structure is claimed.

Even assuming arguendo that Applicant modifies claim 1 of '192 such that it is not limited to being used with the claimed "machine tool", then it is noted that Examiner takes Official Notice that the use of pallet changing devices with machine tool devices (and thus with

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“machine tool facilities”, as broadly claimed) is extremely well-known in the machine tool art for the purpose of further automating the manufacturing process, and that it would therefore have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the claimed pallet changer of claims 1-2 of ‘192 by providing a “machine tool facility” to be used in conjunction therewith as is well-known for achieving the well-known purpose of facilitating the further automation of the manufacturing process performed by the machine tool facility, and for the purpose of providing a market for the use of the claimed pallet changer.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(f) he did not himself invent the subject matter sought to be patented.

7. Claims 1-2 are rejected under 35 U.S.C. 102(f) because the applicant did not invent the claimed subject matter. Note that U.S. Patent Application Publication 2006/0130311 to Kikuchi (having no common inventor with the present application, but having a common assignee), which is the published version of the aforementioned (in the double patenting rejection above) 10/544,192 application, teaches every limitation of each of the present claims. See at least Figures 1-9 of the published Kikuchi application, again noting that the Kikuchi application teaches that the pallet changer is used with a machine tool having a horizontal spindle.

Relating this to the present claim limitation “a machine tool facility”, it is noted that the limitation “a machine tool facility” is a broad limitation and doesn’t impart any specific structure to such a “machine tool facility” beyond the fact that it is a facility having a machine tool. Kikuchi explicitly teaches that the pallet changer is used with a machine tool, and thus teaches the claimed “machine tool facility”, as wherever the machine tool taught by Kikuchi is located is inherently a facility having that machine tool and is thus a “machine tool facility” as broadly claimed.

8. Claims 1-6, as best understood in light of the above rejections under 35 USC 112, are rejected under 35 U.S.C. 102(b) as being anticipated by WO 02/00388 to Geiger et al.

WO ‘388 is not in the English language. However, U.S. Pat. No. 6,826,821 to Geiger et al. is in the same patent family, and is being relied upon as an English equivalent to the WO ‘388 reference. Thus, all references to column and line numbers herein are with respect to the ‘821 patent.

Geiger teaches a machine tool system/“facility” including a plurality of machine tools 36 (36a-36f) laid out in various configurations (see Figures 4 and 14, for example; Figure 1 shows a detail of an individual machine tool 36). Note that Geiger teaches a machine tool having a horizontal main spindle 10 having a tool 16 mounted at a front end thereof, and “table” or “pallet-mounting plate” 26/29 is mounted “facing” the front surface of the spindle 10 (such that a vertical surface of 29 is perpendicular to the horizontal spindle axis as viewed in at least Figure 7), and detachably mounts a “pallet” 31 which has a vertical surface to/on which a workpiece 15 is affixed (see Figures 1, 7, noting that Figure 7 shows the table/pallet-mounting plate 26/29

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positioned facing the spindle 10, noting also that 26 is a turntable device for rotating member 29 about a vertical axis.

Additionally, note that Geiger teaches various embodiments of a supply and take-down equipment arrangement or “pallet exchanger” 41, 61, 72 (see Figures 1 and 8-14) which are used to deliver a pallet 31 to or remove a pallet 31 from a desired machine tool 36a-f (see especially figures 4 and 14), and which pallet exchangers travel along a “track” 38 from one machine tool to another, and back and forth from a “pallet stocker” area 59/60, see Figures 4 and 14, for example, also col. 5, lines 7-21, for example. For example, “pallet exchanger” 61 is shown in Figures 8-12, and has a base, such as, for example, element 42 (other elements could likewise or alternatively be considered a “base” as broadly claimed), a “pallet support member” including, for example, at least element 55 (see Figures 9-12) which “rotates” about vertical axis 68 “in an indexing manner” (see col. 6, lines 2-26, for example, and especially note the pivoting or rotating motion as illustrated in Figures 10-12, which illustrate the rotation movement of 55 about the vertical pivot axis 68, described specifically as vertical in col. 6, line 11). Further note that the “pallet support member”, which includes at least element 55, includes “at least two vertical pallet-mounting surfaces”, such as the vertical pallet gripping surfaces on the gripper jaws 56 of element 55 (note that in Figure 9, axis 68 is the vertical rotation axis, and that jaws 56 have pallet gripping surfaces extending into the plane of the paper that are parallel to that axis). It is noted that these vertical pallet gripping surfaces of the gripper jaws 56 grip vertical surfaces of the pallet, and thus are considered at least in that sense to move the pallet “in a vertical state” as broadly claimed.

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Additionally, re the claimed “pallet moving means”, note that the motor 69 and gearbox 66 are used to perform the rotation motion of 55 about the vertical axis 68, and are thus considered to be the claimed “pallet-moving means for moving the pallet (31), in a vertical state”, between the table/pallet-mounting plate 26/29 and the “pallet support member” including at least 55 to thereby exchange the pallets (see Figures 8-14 and col. 6, lines 2-26).

Re claim 2, see Figures 4 and 14, noting that the “pallet support member” including, for example, at least element 55, is movable along the track (re claim 6) or conveyor path 38 in a horizontal direction perpendicular to the horizontal spindle axis (see also Figure 1, noting the configuration and location of path 38 relative to the horizontal spindle axis) to positions such that it is “arranged in the extension of said table or said pallet mount in the horizontal direction perpendicular to the spindle axis” as claimed.

Additionally, re claim 2, note that the “pallet support member” including, for example, at least element 55, on a side (such as the right side as viewed in Figures 1, 9, and the top side as viewed in Figures 10-12, noting the orientation of 38/39 shown in Figures 9-12) of the pallet support member (55 would be located at the left of Figure 1) where the pallet 31 moves when it is held by 29 (see Figure 1), is able to be arranged “in parallel” to a pallet mounting surface of the table/pallet mount 26/29 (see Figures 1 and 9-14, for example).

Re claim 3, note the use of the “pallet stocker” 59/60 (Figures 4, 14, col. 5, lines 7-21, for example). Note also that as broadly claimed, the pallets 31 are considered to be held on the pallet stocker “in a vertical state” in that the pallets 31 have vertical side surfaces while they are located in the pallet stocker 59/60 as shown in at least Figure 4.

Also re claim 3, note that the “pallet support member” including at least element 55 pivots about vertical axis 68 (as described previously, see also Figure 9, for example), which motion creates a “rotary circle” of movement, and a pallet exchange operation includes a radial component of motion with respect to that “rotary circle” (see Figures 9-14, for example).

Re claim 4, as noted above, the “table” or “pallet-mounting plate” 26/29 is mounted such that 26 is a turntable device for rotating member 29 about a vertical axis, and thus the vertical pallet-mounting surface of member 29 can be rotated about that vertical axis to a position such that it is at a right angle with the horizontal direction of “track” 38. Further note that the “pallet support member” including at least element 55 must inherently be positioned proximal to and at least in some sense “aligned with” the “pallet stocker” 59/60 in order to pick up a pallet therefrom. Also, it is again noted that as broadly claimed, the pallets 31 are considered to be held on the pallet stocker “in a vertical state” in that the pallets 31 have vertical side surfaces while they are located in the pallet stocker 59/60 as shown in at least Figure 4.

Re claim 5, note that plural machine tools 36a-f are shown on one side of track 38 in Figure 4, and that plural machine tools 36a-36f are shown on “both” sides of track 38 in Figure 14. Re the plural pallet stockers, it is noted as broadly claimed, both of elements 59 and 60 can each individually be considered to form a separate “pallet stocker”.

Re claim 6, note the use of the previously-described track 38.

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Examiner particularly notes that U.S. Pat. No. 4,480,738 to Mattson teaches a machine tool facility having a pallet stocker layout similar to that shown in Figure 12 of the

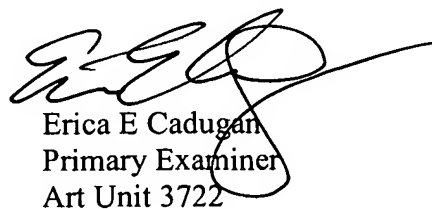
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present application, and that as currently broadly claimed, the pallets being exchanged in the Mattson reference have vertical surfaces, and that the table/pallet mounting plate has vertical surfaces on at least the side of guideways thereof on which the pallets are detachably located when they are in front of the spindle.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Erica E. Cadugan whose telephone number is (571) 272-4474. The examiner can normally be reached on M-F, 6:30 a.m. to 4:00 p.m., alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Monica S. Carter can be reached on (571) 272-4475. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Erica E Cadugan
Primary Examiner
Art Unit 3722

eec
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